

APPENDIX D

DOD NON-FIFRA PESTICIDE APPLICATOR TRAINING
AND CERTIFICATION PROGRAM

INTRODUCTION

This DoD Non-FIFRA Pesticide Applicator Training and Certification Program is issued under the authority of **DoD** Instruction 4150.7 (reference (a)). It replaces the **Non-FIFRA** portion of the “Department of Defense Plan for the Certification of Applicators of Restricted Use Pesticides,” which was canceled by DoD 4150.7-P (reference (b)). This Manual prescribes the procedures for DoD **Non-FIFRA** certification of pesticide applicators.

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DOD NON-FIFRA PESTICIDE APPLICATOR TRAINING AND CERTIFICATION PROGRAM

A. PURPOSE

1. To ensure that pesticide applicator training complies with DoD pest management policy, OEBGD, FGS, **SOFA**, and **host-nation** laws, in accordance with DoD Instruction 4150.7 (reference (a)).

2. To set standards for **Non-FIFRA** training and certification for pesticide applicators operating in **OCONUS Non-FIFRA** areas; e.g., **Japan, Korea**, and Europe.

B. APPLICABILITY

1. **This** Manual applies to all DoD employees applying any pesticides on land **or property** in **Non-FIFRA** areas under DoD jurisdiction. Terms used in this **Manual** that are unique to **the** military pest management program are defined in the “Definitions” section of this Manual..

2. Commercial firms that contract to apply pesticides for the DoD Components are not DoD applicator employees. They may be trained and provided DoD **Non-FIFRA** certification by the Department of Defense.

C. RESPONSIBILITIES

1. DoD Program Responsibility

a. The OSD, as “lead **agent**,” shall have overall responsibility for policy development, **implementation**, and **surveillance** of the DoD Pest Management Program (DoD Instruction 4150.7, **reference** (a)).

b. The AFPMB, chartered by the lead Agency, reviews pest management **policy** matters, proposes policy changes, and establishes **Non-FIFRA** pesticide applicator **training** and certification requirements for the Department of Defense (**reference** (a)).

2. Component Responsibilities

a. Each **Component**, except the Joint Chiefs of **Staff** and the Combatant Commands, shall designate a “senior PMC” as the point of contact for the Component’s **Non-FIFRA** pest management training program.

b. Each Component’s senior PMC, except the Joint Chiefs of Staff and the Combatant Commands, shall nominate **OCONUS** PMCS to **certify** the competency of the Component’s **Non-FIFRA** pesticide applicators. Components nominee’s qualifications shall be formally reviewed and if qualified, approved, and acknowledged by the Executive Director of the **AFPMB**.

c. **Non-FIFRA** certifying officials, in concert with **Non-FIFRA** Component PMCS.

(1) Shall ensure that **Non-FIFRA** certification training meets the requirements of this Appendix.

(2) Assume lead responsibility for **Non-FIFRA** pesticide applicator training in his or her area or responsibility. Recommend applicable region-specific **Non-FIFRA** training requirements for their **Non-FIFRA** area to designated DoD Training centers. Coordinate **Non-FIFRA** pesticide applicator training with the designated training center, training site, and host-nation authorities.

(3) Determines whether candidate pesticide applicators have met DoD and Component training standards.

(4) Issues **Non-FIFRA certification**, as applicable. See Attachment 5 to Appendix D, below.

d. **Training Center Responsibilities**

(1) Develop or review and approve plans of instructions for **Non-FIFRA** training that meet training objectives identified by OCONUS PMCS for overseas areas not under the jurisdiction of **FIFRA** (7 U.S.C. 136 et seq., reference (c)).

(2) Ensure that **Non-FIFRA** training is **conducted**, in accordance with this Appendix, host-nation FGS, OEBGD, and SOFAS.

(3) Ensure that **Non-FIFRA** programs are tailored to fit **language-translation** problems, site specific pests, and host-nation **considerations**; etc.

D. **PROCEDURES**

1. **Deny, Suspending, and Revoking Certification**. Any DoD **Non-FIFRA** pesticide applicator may have his or her certificate **denied, suspended**, or revoked. Situations that may be cause for certificate **denial, suspension**, or revocation are misuse of a pesticide and falsification of any records required to be maintained by the certified applicator. Additional actions that may be cause for denial, **suspension**, or revocation are, as follows:

a. Pending investigations of pesticide-related episodes or accidents resulting in human or animal injury or environmental **contamination**, such as to water supplies, food, and foodstuffs.

b. Conviction under any Federal or host-nation pesticide or environmental law,

c. **Failure** to **maintain** records, as required by **Federal**, host-nation, or DoD Regulation, and Component regulation.

d. Failure to comply with pest management DoD Directives or Regulations, and

Component directives or regulations.

- e. Failure to use applicable **safety equipment, as** identified by the pesticide label.
- f. Inability to perform work in a safe manner due to incompetence, carelessness, or physical or mental deficiency.
- g. Pending outcome of **criminal** or civil action. (See paragraphs D.1 **.a.** through D.1 **b.**, above.)

2. suspension or Revocation of Certification. Installation commanders shall initiate a formal review if pesticide violations are suspected. Any certified applicator who violates any provision of a law or implementing regulations shall have his or her certificate reviewed for possible suspension or revocation. Suspected violations, such as pesticide misuse or recorded **falsification**, shall be reported through applicable **command** channels to the office of the certifying **official**. The **certifying** official shall review the suspected violation and determine if **further** action is required. **If** no action is **warranted**, the installation commander **shall** be notified in **writing** that a review of the suspected violation has been conducted and that it has been determined that a violation has not occurred. **If** the **certifying** official determines that a violation may have occurred, he or she shall initiate action to temporarily suspend the certificate of the applicator(s) and forward the matter to the Component's senior PMC for review.

3. Unauthorized Use of Pesticides

Only certified applicators or persons working under the direct supervision of a certified applicator shall use restricted use pesticides. "Direct supervision" is defined in the "Definitions" section of the 'Front Matter' of this Manual. The individual's certification must be applicable to the work and consistent with DoD categories. **Similarly**, contract pesticide applicators shall be certified **in**, or work under the direct supervision of personnel certified in DoD categories commensurate with the work to be performed. Furthermore, contract specifications shall include the clause that a designated certified individual shall be physically present on the DoD installation.

4. Non-FIFRA Certification Categories. DoD offers **Non-FIFRA certification** in six of the categories that are consistent with those described in 40 CFR 171.3 (**reference** (d)) and two subcategories (3a., and 7a.) to meet the specific requirements for DoD pesticide use. Training and certification in **all** of the DoD categories or subcategories may not be available to **Non-FIFRA** pesticide applicators.

| <u>Pest Control Category</u> | <u>DoD Category</u> |
|--|---------------------|
| Forest Pest Control | 2 |
| Ornamental and Turf Pest Control | 3 |
| Subcategory - Stored Products Fumigation | 3a |

| <u>Pest Control Category</u> | <u>DoD Category</u> |
|--|---------------------|
| Aquatic Pest Control | 5 |
| Right-of-Way Pest Control | 6 |
| Industrial, Institutional, Structural, and Health-Related Pest Control | 7 |
| Subcategory - Stored Products Fumigation | 7a |
| Public Health Pest Control | 8 |

5. **General Core Phase Standards.** DoD employees desiring **Non-FIFRA** certification shall demonstrate practical knowledge of the principles and practices of 1PM, and safe use of pesticides. Testing shall be based on examples of problems and situations **applicable** to the particular category or subcategory of the applicator's certification. (See Attachments 1 and 2, to this **Appendix**, below.) **Successful** passage of a comprehensive **examination** covering the following general or core areas is prerequisite for certification in specific categories:

a. Recognizing common pests to be controlled and damage caused by **them**, including the following:

(1) Common features of pest organisms and characteristics of damage and/or characteristics needed for pest recognition.

(2) Recognition of relevant pests.

(3) Pest development and biology, as maybe relevant to problem identification and control.

b. Label and **labeling comprehension**, including the following

(1) Requirement and/or necessity for use consistent with label.

(2) General format **of** labels and labeling.

(3) Understanding of product versus chemical and common names, signal words and symbols, and precautionary statements commonly appearing on the **label and/or** labeling.

(4) Classification of product (general use versus restricted use).

(5) Protective clothing and equipment requirements.

(6) Environmental hazard statements.

(7) Storage and disposal **instructions**.

(8) When to read different sections of the label and/or labeling.

(9) Directions for use section, to include the following:

- (a) Crop and/or animal and/or site.
- (b) Dosage instructions.
- (c) Timing and methods of application.
- (d) Mixing directions (if applicable).
- (e) Pests to be controlled.

c. Recognizing local environmental situations that must be considered **during** application to avoid **contamination**, including the following:

- (1) Weather **factors** that **affect** pesticide application and why.
- (2) Factors that affect pesticide drift.
- (3) **Factors** that **affect** pesticide runoff and other aquatic **contamination** (including formulation, site, amount of pesticide, soil type, rainfall, drainage, and direct application to waterways).
- (4) Presence of wildlife, bees, aquatic areas, and other nontarget areas.

d. Recognizing pesticide poisoning symptoms and procedures to follow in case of a pesticide **accident**, including the following:

- (1) Signs and symptoms of pesticide **poisoning**.
- (2) First aid (including recognition of pertinent **information** on **label**) and other procedures to be followed in case of a pesticide accident.

e. Storage of pesticides and containers, including the following:

- (1) Applicable storage facility characteristics.
- (2) Storage facility supplies.
- (3). Proper storage and identification of pesticide containers.

f. Disposal of pesticides, containers, **and rinseates**, including the following:

- (1) Proper methods of disposing of excess pesticides.

(2) Proper methods of disposing of pesticide **rinseates**.

(3) Proper methods of disposing of used pesticide containers.

(4) Consequences of improper disposal (including health, environmental, and legal precautions).

g. Legal responsibility; laws, and regulations (and liability information), including the following:

(1) Pertinent host-nation **and/or** U.S. Federal pesticide laws and regulations not previously discussed.

(2) Types of situations in which applicator maybe held liable.

(3) Liability **and/or** penalties as yet another reason for following **information** on labels and/or labeling and other laws and regulations.

(4) The need for **recordkeeping** and how to keep records.

(5) DoD Regulations that affect pesticide applicators.

h. Safety, including the following:

(1) Acute pesticide toxicity levels.

(2) Chronic effects of pesticide exposure.

(3) Concept of accumulative effects.

(4) Concept that risk is a **function** of both pesticide toxicity and exposure.

(5) Common routes of pesticide exposure (oral, **dermal**, and inhalation).

(6) Protective clothing and equipment (including body covering, goggles, aprons, gloves, **hat**, foot coverings, goggles and/or-face shields, and **respirators**).

(7) Care and maintenance of protective clothing and equipment.

(8) Personal hygiene.

(9) Proper mixing and/or loading of concentrated pesticides.

(10) Closed handling systems.

i. Reentry and worker protection, including the following:

- (1) Definition and importance of reentry intervals.
- (2) Types of reentry intervals.
- (3) Warnings to workers and reentry intervals.
- (4) Content of **warning** to workers.
- (5) Early reentry.
- (6) Other worker protection rules.

j. Pesticides, including the following:

- (1) **Classes** and types of pesticides.
- (2) Choosing the correct pesticide.
- (3) Typical formulations (characteristics, advantages, disadvantages, **and** main uses).
- (4) Pesticide compatibility.
- (5) Adjutant and **surfactants**.
- (6) Factors that influence effectiveness or lead to such problems as resistance to pesticides.

k. Pest control strategies, including IPM factors such as the following:

- (1) Insect pests.
 - (a) Insect control strategies.
 - (b) Importance of accurate pest identification and timing in the pest's **life** cycle to control strategies.
- (2) Plant disease pests, including the following:
 - (a) Plant disease control strategies.
 - (b) Types of control strategies,
 - (c) Importance of timing in developing and applying disease control strategies.
- (3) Weeds, including the following:

(a) Weed control strategies.

(b) Importance of timing in developing and applying weed control strategies.

(4) Mollusk control strategies (if applicable).

(5) Vertebrate control strategies. /

1. Application equipment factors such as the following:

(1) Typical **pesticide** spray equipment (characteristics, advantages, disadvantages, and main uses).

(2) **Nozzle** patterns and materials.

(3) Sprayer **selection**, use, and care.

(4) Granular applicators (characteristics, advantages, disadvantages, main uses, selection, use, and care).

(5) Cleanup of equipment after use.

m. Calibration factors, such as the following:

(1) Mixing soluble and wettable powders.

(2) Mixing liquid concentrate formulations.

(3) Determining size of area to be treated.

(4) Considerations before calibration **of** sprayer.

(5) Selecting nozzle tips.

(6) Adjusting nozzle output,

(7) Swath width and equipment **calibration**.

(8) Field calibration of sprayer.

(9) Calibration of granular applicators (if applicable).

n. **Proper** transportation of pesticides.

o. **Groundwater** protection factors, such as the following:

(1) Nature of groundwater.

(2) Factors that **affect** groundwater contamination.

(3) Local groundwater conditions.

(4) Applicator practices that impact on groundwater contamination including the use of **buffer** zones.

p. Endangered species protection factors such as the following:

(1) Endangered species recognition.

(2) Concept of habitat.

(3) Ways pesticides may harm endangered species.

q. Responsibility of applicators to use pesticides properly to protect such products for **future** use and supervision responsibilities of **certified applicators**.

6. Competence Examinations

a. Certification Requirement. DoD employees desiring certification must demonstrate competency **in** specific standards, as described **in** Attachment 1 to this **Appendix**, below. .

b. Evaluation of Competency

(1) Written Requirements. A closed book written **examination** shall be required to determine competency **in** general and applicable specific **standards** outlined in Attachment 1 to this **Appendix**, below, for each category of certification. Testing shall be based on examples of problems and situations **applicable** to the particular category or subcategory of the applicator's certification and areas of competency outlined in the general **and** specific standards of competency. Examinations may include **true-false**, multiple choice, **completion**, and problem **type questions and shall** require a **passing score** of at **least 70** percent. **Sample examination** questions are shown in Attachment 2 to this Appendix, below.

(2) Performance Requirements. Written and **performance** testing shall be conducted for the core phase (general standards) and the categories (specific standards) in which training and certification is desired. **Satisfactory** completion of training courses, written examinations and demonstration of the **ability** to perform a procedure or use of dispersal equipment qualifies an individual for certification. On qualification of an individual, the training **center shall** notify the applicable pest management **certifying** official that the individual completed **formal** training requirements for **Non-FIFRA** certification in designated categories, as described in section D., above.

7. Procedures for Issuing Certificates of Competency. Certificates shall be issued to pest management personnel by the designated **certifying** official on determination that the candidate has **successfully** completed certification requirements. Personnel **successfully** completing certification requirements for the core and one or more of the pest control categories and apprenticeship requirements shall be issued a certificate of competency (**DD Form 1826, 8 % “ X 11,”** and DD 1826-1, wallet size, see Attachment 3 to this **Appendix**, below). To **identify** certified personnel, a uniform numbering system shall be used in the issue of certificates (see Attachment 5 to this Appendix, below).

E. DOD NON-FIFRA PESTICIDE APPLICATOR CERTIFICATION TRAINING PROGRAM

1. Developmental training is provided for previously untrained and inexperienced personnel who embark on a training program, not to exceed 2 years. During that **period**, all pesticide **application** is done under the direct supervision of a certified pesticide applicator. The training program shall consist of the two following requirements: apprenticeship training **and** formal component training-center approved classroom training. Written examinations are required for formal training to achieve certification.

2. During training, anticipated language problems maybe overcome by **maximizing “hands-on”** training with equipment and materials that shall be used in pest management work. That type of training places instructors and trainees on a common ground and eases the burden of communication.

3. Presentation of course instruction and examinations in the native language is encouraged. Trainees shall demonstrate the ability to comprehend labels written in **English**, as a minimum.

a. Training and Certification Procedures

(1) Apprenticeship IPM Training. Trainees shall participate in apprenticeship training under the supervision of a DoD-certified individual, or if not available, under the guidance of a PPMP, for at least **1** year. A sample apprenticeship **training** plan **is** outlined in Appendix C, above.

(2) Formal Classroom Training. Formal classroom training shall be obtained through one of the Component training centers. Formal classroom training maybe requested at OCONUS sites under **Non-FIFRA** jurisdiction when it is more cost **effective** to the Department of Defense.

(a) The DoD “Training Centers” are, as follows:

U. S. **Army** AMEDD Center and School
ATTN: **MCCS-PM**
Fort Sam Houston, TX 78234-6142

Center for Health Promotion and Preventive Medicine-Europe
ATTN: **MCHB-EN**
CMR 402
APOAE 09180

Navy Disease Vector Ecology and Control Center
19950 Seventh Avenue, NE, Suite 201
Poulsbo, WA 98370-7045

Navy Disease Vector Ecology and Control Center
Naval Air Station, Box 43
Jacksonville, FL 32212-0043

Atlantic Division
NAVFACENGCOM
1510 Gilbert Street
Norfolk, VA 23511-6287

Naval Facilities Engineering Command Headquarters
200 Stovall Street
Alexandria, VA 22332-2300

Pacific Division
NAVFACENGCOM
Pearl Harbor, HI 96860-7300

(b) Individuals shall be required to complete **course** curricula applicable to their duties, to include a core phase and specific category courses. All students are required to pass both portions of pest control training (core and category) to be DoD **Non-FIFRA** certified. The core phase is a prerequisite and provides basic **information** common to all pesticide applicators. Category courses may be grouped to facilitate training and specialization. Those pest control categories may be addressed as separate blocks of instruction as the training situation dictates. (See Attachment 5 to this **Appendix**, below, for information and subject areas of the service **schools** training course **curricula**.)

(3) Written **examinations**, prepared by training centers of the respective Components, shall be based on course content and study materials made available to applicators. The actual number of examination questions for each subject shall be directly related to the instructional hours and subject complexity, but **three** questions for each lecture hour (see Attachment 5 to this **Appendix**, below) shall be a minimum used by **all** the training centers. Separate examinations **shall** be given for the core section and each category section. (Sample examination questions are included in Attachment 3 to this **Appendix**, below).

- (4) Training centers shall provide the designated certifying official with **examination** results on the individual's attainment of the qualifying test scores in the core phase and on individual categories. A grade of at least 70 percent on any examination is passing. **Personnel** with scores **between** 50 percent and 70 percent on the core phase exam may attempt an immediate reexamination (at the discretion of the course director **and** the individual's supervisor) or may take up to 90 days to restudy and undergo reexamination. During the core phase, an individual who fails with a score of 50 percent or less shall be **disenrolled** from the formal training course and the installation, designated **certifying** official and the major command PMC

shall be notified for applicable action. A passing grade on the core phase examination is a prerequisite for certification in any category.

(5) Individuals who score between 50 percent and 70 percent **shall** be allowed to continue with category training and to retake the examination(s) **failed**. Personnel with scores between 50 percent and 70 percent may attempt an immediate reexamination (at the discretion of the course director and the individual's supervisor) or may take up to 90 days to restudy and undergo re-examination. Reexamination may be administered by the educational center **supporting the individual's** installation. A second failure shall result in a recommendation by the training center to the command consultant ardor area **PPMP** to remove the individual from pest control duties. “

(6) Training centers providing training for **personnel** from other Services shall forward those results to the respective Component **certifying** official.

2. Procedures for Recertification

a. Triennial recertification training and testing is mandatory to maintain DoD certification. That training shall be accomplished through attendance at an approved DoD course. During those courses, new **information** is provided to update the knowledge of the students and to review safety procedures. A secondary requirement of those courses is to re-evaluate the students level of competency in pest control through written examinations and OJT Performance. Since it is the objective of the Department of Defense to maintain a **fully** trained pest control force, the courses shall be made available **to all** certified applicators. .

b. Certification is valid for 3 years from the date of certification issuance. Recertification **shall** be accomplished by the last day of the month in which the original certificate expires. The certifying official may extend an individual's certification for cause on a one-time basis for a period of not more than 6 months. To be **certified**, the individual must do the following

(1) Attend a DoD-approved recertification course using as a minimum the **AFPMB standar dized** curricula (Attachment 4 to this **Appendix**, below).

(2) Take and pass a written **examination** with a score of at least 70 percent on the core to include calculations, calibration, **and all** category **examinations** for which recertification is required.

(3) An individual **failing** a recertification examination may be given up to 90 days from the **date** on which the examination was failed to study applicable materials. At the end of the study **period**, the pest management instructor or the installation training officer shall administer a closed-book make-up examination. A second failure shall result in the individual not being certified in the category(s) failed. Successful completion of the resident basic training course shall be the only method of obtaining certification in a category **failed** twice. In either case, **failure in** the recertification examination shall be cause for certificate revocation and for recommendation for removal from pest control functions. Documentation of failures shall be forwarded to the command PMC.

..... c. Applicator recertification courses. shall be consistent with the requirements of Attachment 4 to this Appendix, below. Personnel attending recertification courses shall only be allowed to test and **qualify** in those categories for which they already hold initial certification. New category training must be achieved, as outlined in subsection D.6., above. Additional contact **hours** maybe added at the discretion of the local training sponsor.

3. Certification Documents

a. DoD certificates (see Attachment 3 to this Appendix, below) shall be issued for specific pest control categories to pesticide applicators who **successfully** complete the required training (see Attachment 1 to this Appendix, below).

b. Procedures for issuing DoD certificates for pesticide applicators are given in Attachment 5 to this Appendix, below.

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| 1. DoD Non-FIFRA Category Certification Standards | D-1-1 |
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DoD NON-FIFRA CATEGORY CERTIFICATION STANDARDS

A. DOD Pest Control Categories

DoD pest control categories 2. through 8. correspond to EPA categories 2. through 8. described in 40 CFR 171.3 (reference (d)). **The** Department of Defense has added two subcategories: subcategory 3a., “Soil **Fumigation**,” and Subcategory 7a, “Stored Products Fumigation.” DoD employees desiring certification must demonstrate competency in the categories of pest control that they seek certification.

B. Standards of Competency

Standards of competency required by the Department of Defense are described in subsections B.1. through B.8., below —

1. Forest Pest Control. Category 2. Individuals to be certified in that category must successfully complete the core phase. They must attend a training program and pass a written examination covering, but not limited to, forest management practices, **fertilization** programs, plant biology, physiology and pathology, classification and mode of action of pesticides, biology and control of forest pests, and natural resources utilization.

2. Ornamental and Turf Pest Control. Category 3. Individuals to be certified in that category must **successfully** complete the core phase. They must attend a training program and pass a written **examination** covering, but not limited to, vegetation and turf management practices, **fertilization** programs, plant biology and physiology, classification and mode of action of herbicides, biology and control of ornamental **and** turf pests and diseases, weed control, and **natural** resources conservation programs.

3. soil Fumigation. Subcategory 3.a. Individuals to be certified in that category must successfully complete the core phase and category 3. training. They must complete training and pass a **written** examination covering soil **fumigation**. That training shall include, but not limited to, protective equipment for **fumigation**, general safety procedures, including posting, reentry and **aeration**, supervisory responsibilities, and application techniques applicable to various situations.

4. Aquatic Pest Control. Category 5. Individuals to be certified in that category must successfully complete the core phase. They must attend a training program and pass a written examination covering, but not limited to, plant biology and physiology, identification and control of aquatic weeds, classification and mode of action of herbicides, and natural resources conservation programs. That category excludes applicators engaged in public health-related activities. Such applicators shall be covered in “Public Health Pest Control,” Category 8., below.

5. Right-of-Way Pest Control. Category 6. Individuals to be certified in that category must successfully complete the core phase. They must attend a training program and pass a written examination covering, but not limited to, plant biology and physiology, identification and control of weeds, classification and mode of action of herbicides, and natural resources **conservation**

programs.

6. Industrial, Institutional, Structural, and Health-Related Pest Control. Category 7.

Individuals to be certified in that category must successfully complete the core phase. They must attend a training program and pass a written examination covering, but not **limited** to, biology, identification and control of common household pests, control of vertebrate pests, control of wood destroying organisms, biology and control of termites, biology and control of stored product pests, and fumigation procedures.

7. Stored Product Fumigation. Subcategory 7a. Individuals to be certified in that category must successfully complete the core phase and category 7. **training**. They must attend a training program and pass a written examination covering the fumigation of stored subsistence and other commodities. That training shall include, but not limited to, use of personal protective equipment for **fumigation**, general **safety** procedures, including posting, **monitoring, reentry** and **aeration**, and application techniques applicable to various situations.

8. Public Health Pest Control. Category 8. Individuals to be certified in that category must successfully complete the core phase. They must attend a training program and pass a written examination covering, but not limited to, biology, identification and control of vectors and pests of medical importance, identification and handling of venomous animals, and control of vertebrate disease reservoirs, including rodent control techniques.

SAMPLE EXAMINATION QUESTIONS

A. GENERAL STANDARDS TEST FOR CORE

Use the pesticide label for **Dursban** LO to answer questions 1. through 3.

1. All registered pesticides have a statement on the label reading:
 - a. Danger- Poison
 - b. **Toxic** to Bees
 - c. Warning - Toxic
 - d. Keep out of Reach of Children
2. What is the acute oral toxicity (**LD50**), which is indicated by the signal word?
 - a. 0-50 milligrams per kilogram (**mg/kg**)
 - b. 50-500 **mg/kg**
 - c. 500-5,000 **mg/kg**
 - d. Greater than 5,000 **mg/kg**
3. From the label, which of the below is NOT a target pest?
 - a. Fleas
 - b. Silverfish
 - c. Honeybees
 - d. Subterranean termites
4. Which kind of pesticide prevents normal clotting of blood?
 - a. **Surfactant**
 - b. **Synergist**
 - c. Anticoagulant
 - d. Animal systemic

5. If it is determined that a pesticide treatment is necessary, then the applicator should select a pesticide that will:

- a. Kill all **insects** in target area
- b. Remain active for many years
- c. Be effective while harming the environment least
- d. Do all of the above

6. Pesticides must be repackaged if containers are leaking. Which of the following must be put on the new container?

- a. Sign **signifying** type of poison
- b. Complete label
- c. Sign with name and percent of pesticide
- d. Sign with word “danger” and name of pesticide

7. A pesticide that is absorbed in one part of a plant or animal and transported to another part where it kills a pest is called a

- a. Contact pesticide
- b. Volatile pesticide
- c. Residual pesticide
- d. Systemic pesticide

8. To spray weeds using a hydraulic sprayer, what type of nozzle and pressure do you need?

- a. Coarse nozzle and high pressure
- b. Coarse nozzle and low pressure
- c. Fine nozzle and high pressure
- d. **Fine** nozzle and low pressure

B. CATEGORY 3.. ORNAMENTAL AND TURF PEST CONTROL

1. When spraying near human habitations you should minimize the hazard of spray **drift** to humans, pets, **and other** domestic animals by reducing:

- a. Pressure
- b. Volume
- c. Vehicle speed
- d. Diameter of nozzle openings

2. If you find circles or arcs of dark-green grass with mushrooms around the outer edge, surrounding areas of light-colored or dead grass, what would you suspect?

- a. Dollar spot
- b. Rotting roots or wood under-turf
- c. Fairy **ring**
- d. Cottony blight

3. Small, sometimes immobile insects with sucking mouthparts and often with **waxy** body coverings are:

- a. Spider mites
- b. Scale insects
- c. **Thrips**
- d. Sowbugs

4. Mole damage to turf areas may be sharply reduced by:

- a. Daily watering
- b. Soil **tilling**
- c. **Elimination** of food insects
- d. Soil compaction

C. CATEGORY 5.. AQUATIC PEST CONTROL

1. Water hyacinth is an example of a (an):
 - a. Emerged weed
 - b. Submerged weed
 - c. Free. floating weed
 - d. Floating, but rooted, weed
2. The most effective and extensively used herbicide for algae control is:
 - a. 2, 4-D
 - b. **Dalapon**
 - c. Copper Sulfate
 - d. **Silvex**
3. The first step in controlling weeds growing in drainage ditches **is** to:
 - a. Select proper herbicide
 - b. **Identify** the weed problem
 - c. Calculate amount of herbicide required
 - d. Determine the area to be sprayed
4. To control **coontails**, you are to apply **Aquathol Plus^R** at the rate of 1 gallon for each acre foot. You determine that **the** surface area is 20 acres and the lake average depth is 12 feet. How **many** gallons of **Aquathol** Plus do *you* need?
 - a. 1.6
 - b. **16**
 - c. 240..
 - d. 320 “““”

D. CATEGORY 6.. RIGHT-OF-WAY PEST CONTROL

1. Insecticidal and **herbicidal** equipment should not be interchanged primarily to protect the:
 - a. Public
 - b. Operator
 - c. Environment
 - d. Desirable plants

2. If a standard rate of 2 pounds active ingredient (AI) for each acre is **given**, how much 2,4-D amine salt product is needed if the product contains 4 pounds AI per gallon?
 - a. 0.5 gallons
 - b. 1.0 gallons
 - c. 2.0 gallons
 - d. 10 gallons

3. Contact herbicides are most effective against perennial plants.
 - a. True
 - b. False

4. Sometimes the taste of plants is improved as a result of herbicide spraying. That presents a danger **primarily** to:
 - a. The operator
 - b. Children
 - c. Livestock
 - d. Desirable vegetation

5. Irrigation ditches and potable water supplies should be protected from persistent herbicides such as **picloram** by:
 - a. Using a mist machine
 - b. Leaving a buffer zone

**E. CATEGORY 7. INDUSTRIAL, INSTITUTIONAL, STRUCTURAL AND HEALTH
RELATED PEST CONTROL**

1. The domestic rodent that is most dependent on humans and is the most common is the:
 - a. Roof rat
 - b. Norway rat
 - c. Prairie dog
 - d. Ground squirrel
2. Which cockroaches are commonly found in sewer lines and in damp and @ basements?
 - a. Oriental and American cockroaches
 - b. German and Brown-banded cockroaches
 - c. Brown and Australian cockroaches
 - d. Smoky-brown and Oriental cockroaches
3. The most important factor in the control of cockroaches is:
 - a. Selection of the proper dispersal equipment
 - b. Correct timing of applications
 - c. Sanitation
 - d. Selection of the correct insecticide
4. Effective control of cat or dog **fleas** can only be achieved **if**:
 - a. The outside and underside of the house are treated
 - b. **The** animals and premises are treated at the same time
 - c. Outdoor residual treatment is carried out
 - d. **The animals** are sprayed or dipped with the proper insecticide

F. CATEGORY 8.. PUBLIC HEALTH PEST CONTROL

1. Which one of the diseases, below, is transmitted to man through infected bird droppings?
 - a. Typhus fever
 - b. Arthropod-borne encephalitis
 - c. **Histoplasmosis**
 - d. All of the above
2. The vector responsible for the transmission of plague and **murine** typhus is the:
 - a. German cockroach
 - b. Oriental rat flea
 - c. House mouse mite
3. In a plague endemic area your initial control measures should be directed against the:
 - a. Rodents
 - b. Wild birds
 - c. **Ectoparasites**
4. Why should an insecticide dust be used in a rodent control program?
 - a. To kill the **fleas** carried by rats
 - b. To increase the rat killing power of poisoned baits
 - c. Many insecticides **are** effective rodent killers
 - d. Dusts are more toxic to fleas
5. The primary consideration in housefly control is:
 - a. Residual spray
 - b. Use of aerosols
 - c. Sanitation

d. Malathion sugar baits

6. The most important disease transmitted by mosquitoes in the United States is:

a. Plague

b. Encephalitis

c. Malaria

d. Dog heartworm

7. Which of the following possible control methods would be the proper choice for efficient mosquito control in a pond used for recreational fishing and boating?

a. Standing water should be eliminated by drainage or filling

b. Pond **should** be stocked with mosquito **feeding** fish

c. ULV application should be made on a weekly basis

d. Mosquito **larvicides** should be applied on biweekly basis

8. If you are sent to the housing area on post to control Aedes aegypti, the yellow fever mosquito, which of the following techniques would be most effective?

a. Ditching and filling breeding sites -

b. ULV spraying of the area

c. Emptying and removing artificial containers

d. Dusting the breeding sites

Page size (DD Form 1826)

The Department of Defense



Certificate of Competency

A-001-77
Certificate No

is Awarded to

MARCH 1, 1980
Expiration Date

MR. JOHN DOE

*in Recognition of the Completion of Requirements for
Certified Applicator in the following Pest Control Categories*

1. ORNAMENTAL AND TURF

5. AQUATIC PEST MANAGEMENT

6. RIGHT OF WAY MANAGEMENT

7. INDUSTRIAL, INSTITUTIONAL, STRUCTURAL, AND HEALTH-RELATED

8. PUBLIC HEALTH

as prescribed by Department of Defense Standards

This Certificate authorizes the recipient to select and apply pesticides

MARCH 1, 1977


Certifying Official

Date

Commanding Officer

Figure D-3- 1. DD Form 1826, “DoD Certificate of Competency”

Wallet size (DD Form 1826-1)



PESTICIDE APPLICATOR

Certificate No. A-001-77 is awarded to
MR. JOEN DOE

as CERTIFIED PESTICIDE APPLICATOR in the pest control categories indicated on the reverse as prescribed by Department of Defense standards. This certificate authorizes the recipient to select and apply pesticides.

1 MAR 1980
Expiration Date

Certifying Official

DD Form 1826-1
88 NOV

Figure D-3-2. DD Form 1826-1. “Pesticide Applicator” (Front side)

PEST CONTROL CATEGORIES

(Line out invalid categories)

~~1a. Agricultural Plant~~

~~1b. Agricultural Animal~~

~~2. Forest~~

3. Ornamental attd Turf

~~4. Seed Treatment~~

s. Aquatic

6. Right-of-Way

7. Industrial. Institutional, Structural, and Health-Related

8. Public Health

~~9. Regulatory~~

~~10. Demonstration and Research~~

~~11. Aerial Application~~

Figure D-3-3. DD Form 1826-1, continued

MINIm CURRICULUM REOUIREMENTS FOR DOD
NON-FIFRA CERTIFICATION
AND RECERTIFICATION TRAINING

A. MINIMUM CURRICULUM REQUIREMENTS FOR CORE TRAINING

| <u>TITLE</u> | <u>HOURS REQUIRED</u> |
|---|---------------------------|
| 1. Introduction to DoD IPM | 0.5 |
| 2. Laws, Regulations, and Reporting Requirements | 5.0 |
| a. Federal and Host-Nation Laws Regulating Pesticide Use | |
| b. DoD Documents | |
| c. The Label and Labeling | |
| d. Records and Reports | |
| 3. Pesticide Calculations | 6.0 |
| 4. Pesticide Safety | 9.0 |
| a. Harmful Effects | |
| (1) To the Applicator | |
| (2) To the Environment | |
| (3) Areas of Special Concern | |
| (a) Groundwater | |
| (b) Rare and Endangered Species | |
| b,. Protecting the Applicator | |
| (1) programs for the Protection of Pesticide Applicators | |
| (2) Personal Protective Equipment (PPE) | |
| (3) Medical Response to Pesticide Poisoning | |

c. Protecting the Environment

(1) Preventing Spills

(a) **Mixing** and Loading

(b) Pesticide Transportation

(c) Pesticide Storage

(2) Spill **Remediation**

(3) Pesticide Disposal

(4) Equipment Calibration

d. The Pest Management Shop

5. Introduction to Pests 4.0

6. **Integrated** Pest Management 9.5

a. Introduction

b. Nonchemical Methods

(1) Cultural Management and Biological Management

(2) Genetic Management

(3) Regulatory Management

(4) Mechanical and Physical Management

c. Chemical Methods

(1) **Attractants**

(2) Repellents

(3) Plant **Growth Regulators**

(4) Pesticides

(a) Defining Pesticides

(b) Modes of Entry

(c) Families of Pesticides

(d) **Formulations**

(e) Selecting Pesticides and Formulations; Case Studies

d. Addressing **Unsuccessful** Pest Management programs

(1) Reviewing Nonchemical Elements of the Program

(2) Reviewing Selection and Application of Pesticides

(3) Pesticide Resistance

e. IPM Case Studies

7. Equipment Overview1.5

8. Administrative Procedures (Reviews and Competency Exams; etc.)4.5

TOTAL HOURS = 40.0

B. RECOMMENDED MINIMUM CURRICULUM REQUIREMENTS FOR COMBINED TRAINING IN CATEGORY 2., “FOREST PEST CONTROL”; CATEGORY 3., “ORNAMENTAL AND TURF PEST CONTROL”; CATEGORY 5., “AQUATIC PEST CONTROL”; AND CATEGORY 6., “RIGHT-OF-WAY PEST CONTROL”

| <u>TITLE</u> | <u>HOURS REQUIRED</u> |
|---|---------------------------|
| 1. Introduction to Nonchemical Integrated Vegetation Management | 1.0 |
| 2. Plant Biology and Physiology | 1.0 |
| 3. Plant Health Maintenance Programs; Ornamental and Turf | 3-0 |
| 4. Classification, Use and Mode of Action of Herbicides, Fungicides, and Nematicides . | 3.0 |
| 5. Health Hazards of Herbicides, Fungicides, and Nematicides | 1.0 |
| 6. Diseases of Turf, Ornamental, and Trees ; and Nematode Management | 3.0 |
| 7. Pests of Turf, Trees, and Omamentals. | 3.0 |
| 8. Aquatic Weeds; Identification and Management | 1.5 . |
| 9. Natural Resources Conservation Program | 2.0 |
| 10. Pesticide Use Problems | 4.0 |
| 11. Forest Pest Management | 0.5 |
| 12. Vegetation Management Equipment | 3.0 |
| 13. Administrative Procedures (Reviews and Competency Exams; etc.) | 6.0 |
| TOTAL HOURS = 32.0 | |

(OCONUS PMCS, following coordination with OCONUS certifying officials and training centers may modify the **curriculum** based on regional pest management objectives.)

c. MINIMUM cURRICULUM REQUIREMENTS FOR TRAINING IN SUBCATEGORY 3a.. “SOIL FUMIGATION”

Soil Fumigation ‘(Besides the 32-hour combined category 2.,3.,5., and 6. training)4.0

D . RECOMMENDED MINIMUM CURRICULUM REQUIREMENTS FOR COMBINED TRAINING IN CATEGORY 7.. “INDUSTRIAL, INSTITUTIONAL, STRUCTURAL, AND HEALTH-RELATED PEST CONTROL”: AND CATEGORY 8.. “PUBLIC HEALTH PEST CONTROL”

| <u>TITLE</u> | <u>HOURS REQUIRED</u> |
|--|---------------------------|
| 1. Fleas | 2.0 |
| 2. Cockroaches | 2.5 |
| 3. Stored Products Pests | 2.5 |
| 4. Ticks and Mites | 2.0 |
| 5. Flies other than Mosquitoes | 3.0 |
| 6. Mosquitoes | 4.0 |
| 7. Venomous Animals | 1.0 |
| 8. Vertebrate Pests | 1.5 |
| 9. Rodents | 2.0 |
| 10. Equipment | 12.0 |
| 11. Ants | 1.0 |
| 12. Other Household Pests | 0.5 |
| 13. Wood Preservation | 1.0 |
| 14. Other Wood Destroying Organisms | 2.0 |
| 15. Termites | 5.0 |
| 16. Administrative Procedures (Reviews and Competency Exams; etc.) | 6.0 |

TOTAL HOURS = 48.0

OCONUS **PMCs**, following coordination with **OCONUS** certifying officials and training centers may **modify** the curriculum based on regional pest management objectives.

¹Topics 1. through 16. are required for category 7. .

²Only topics 1. through 12. and 4.0 hours, administrative time **are** required for category 8.

E. MINIMUM CURRICULUM REQUIREMENTS FOR TRAINING IN SUBCATEGORY 7a.
STORED PRODUCTS FUMIGATION

Stored Products Fumigation (Besides the 48-hour combined category 7. and 8. training) . 4.0

F. RECOMMENDED MINIMUM CURRICULUM REQUIREMENTS FOR NON-FIFRA
RECERTIFICATION TRAINING IN CORE

| <u>TITLE</u> | <u>HOURS REQUIRED</u> |
|---|---------------------------|
| 1. Environmental Protection and 1PM | |
| 2. Pesticide Safety | |
| 3. Pesticides | |
| 4. Laws, Labels, and Labeling | |
| 5. Formulations, Calculations, and Applications | |
| 6. Records | |
| 7. Equipment | |
| 8. Administrative Procedures (Reviews and Competency Exams; etc.) | |
| | TOTAL HOURS = 9.0 |

G. MINIMUM CURRICULUM REQUIREMENTS FOR NON-FIFRA RECERTIFICATION
TRAINING IN CATEGORIES 2., 3., 5., and 6(C(COMBINED))

| <u>TITLE</u> | <u>HOURS REQUIRED</u> |
|---|---------------------------|
| 1. Plant and Turf Diseases | |
| 2. Insect Pests of Plants | |
| 3. Vegetation Management (Weeds and Aquatics) | |
| 4. Seminar and/or Problems, and Discussion | |
| 5. Administrative Procedures (Reviews and Competency Exams; etc.) | |
| | TOTAL HOURS = 9.0 |

H. RECOMMENDED MINIMUM CURRICULUM REQUIREMENTS FOR NON-FIFRA
RECERTIFICATION TRAINING IN CATEGORIES 7. AND 8. (COMBINED)

| <u>TITLE</u> | <u>HOURS REQUIRED</u> |
|---|---------------------------|
| 1. Household Pests ^{1,2,3} | |
| 2. Stored Products Pests ^{1,2,3} | |
| 3. Ticks and Mites ^{1,2,3} | |
| 4. Mosquitoes ^{1,2,3} | |
| 5. Flies other than Mosquitoes ^{1,2,3} | |
| 6. Venomous Organisms ^{1,2,3} | |
| 7. Rodents ^{1,2,3} | |
| 8. Other Vertebrates ^{1,2,3} | |
| 9. Termites ^{1,2} | |
| 10. Other Wood Destroying Organisms ^{1,2} | |
| 11. Wood Preservation ^{1,2} | |
| 12. Stored Products Fumigation | |
| 13. Administrative Procedures (Reviews and Competency Exams; etc.) ^{1,2,3} | |
| TOTAL HOURS = 9.0 | |

¹Topics 1. through 11. and 13. are required for category 7., “Recertification.”

²Topics 1. through 13. are required for category 7a., “Recertification.”

³Topics 1. through 8. and 13. are required for category 8., ” Recertification.”

PROCEDURES FOR ISSUING DOD CERTIFICATES
FOR PESTICIDES APPLICATORS

A. Certificates shall be issued to pest management personnel by the designated certifying official on determination that the candidate has **successfully** completed certification requirements. Installation civilian and local national pesticide applicator personnel must **successfully** pass the core and one or more of the **Non-FIFRA** pest control categories and apprenticeship requirements to be issued a “DoD Certificate of Competency” by the designated **certifying official**. When individuals have completed initial formal training at one of the training centers, the officer in charge of the training center shall provide an identification number for the certificate. To **identify** certified personnel, a numbering system shall be used in the issue of either certificate (DD Form 1826, 8 1/2” x 11,” or DD Form 1826-1, wallet size). Examples are provided in Attachment 3 to Appendix D, **above**.

B. Certificate numbers shall contain three or four elements, as follows: —

1. The **first**, consisting of two or three letters, is a designation of where the individual was originally trained. The designations are, as follows:

- a. OA - U.S. Army **AMEDD** Center and School, Fort Sam Houston, TX
- b. OAE - U.S. **Army** CHPPM Europe
- c. OAF - 366TH Training Squadron, Sheppard Air Force Base, TX
- d. ONJ - Navy Disease Vector Ecology and Control Center, Jacksonville, FL
- e. **ONB** - Navy Disease Vector Ecology and Control Center, Bangor, WA

2. The second element is a sequential three-digit number assigned by the initial training center.

3. The third is a two-digit number indicating the calendar year in which initial certification was received.

4. The fourth element is a four-digit number indicating the month and calendar year of current recertification. That element is not required on certificates for pesticide applicators during their **first** 3 years of **DoD** certification. As an example, the certificate number OAE-001-77-0179 indicates that the certificate holder was initially certified at the Army school at U.S. Army **CHPPM**- Europe; was the first person certified by that center in 1977; and was recertified in **January** 1979.

C. The words, “**NON-FIFRA CERTIFICATION**” shall precede the listing of certification categories on each DD Form 1826 and 1826-1 issued for **Non-FIFRA** certification. Categories of certification shall be indicated on each certificate. On the **DD** Form 1826, the pest control certification categories shall be listed. On the DD Form 1826-1, the wallet certificate, invalid

categories **shall** be lined out before issue. Where facilities are **available**, it is desirable to laminate the wallet certificates **after** completion.

D. Wallet-size certificates (**DD** Form 1826-1) shall be issued bearing the **same information** as the **full-size** certificates (**DD** Form 1826). Certified individuals **shall** carry those cards while in the performance of their duties.

E. Certificate numbers vacated by **revocation, resignation**, or for any other reasons shall not be reissued.

F. Certificates shall bear the name of the individual without any additional titles. In situations where it is desirable to **identify** the certified individual as a “pest control inspector,” or “**planner-estimator**,” a standard recognition form shall be used.

G. Certificates shall expire 3 years **from** the last day of the month in which the certificate is issued. The **certifying** official may extend an individual’s certification for cause on a one time basis for a period of not more than 6 months.

H. A current list of **certifying** officials shall be maintained by the Component senior PMC and the **AFPMB**.